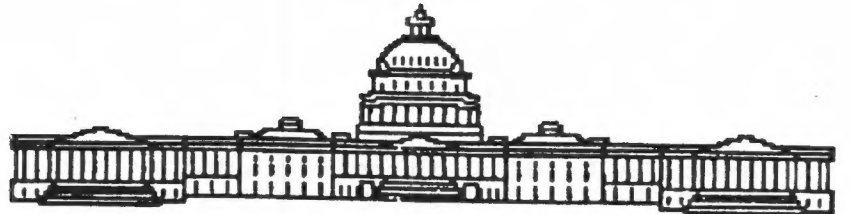# CATS NEWSLETTER

The Official Journal of the Capital Area Timex/Sinclair Users Group

Presidential Ramblings

This is a particularly difficult ramble for me to write as I must offer up a bitter pill for consumption. Much as I would like to otherwise think, I am forced to the reality of our situation as a viable "organization". I have counted the "noses" needed to staff our group in accordance with our Constitution and arrive at the number ten. Add to that, the space for the person who runs our bulletin board and it comes to almost exactly the average attendance (11-1/12) at our meetings since March 1992, not including our "snow cancelled meeting of March 1993. Since June 1991, we have

editorship to his head, in addition to being our bulletin board operator and you can (or should be able to) appreciate the strait in which we find ourselves. I must here include the grand efforts of Audrey and Bob Curnutt who have been doing the legwork to insure printing and distribution of the newsletter for several years. I note that records show that either one or both of them have attended only three meetings since February 1992, yet they have faithfully answered the need to support the group. Kudos to them!

Of the average number of reasonably regular attendees, six are from without the D.C. area commuting

What Shall We Do?
Come and help us decide!

operated without a Recording Secretary and since July 1992, without a 2nd Vice President whose onerous duty encompassed that of obtaining people willing to present programs at our monthly meetings. Primarily through my inaction, our Executive Board vacancies have not been filled and I must report that I have NOT been able to find a member willing to take on the redoubtable task of heading up a Nominating Committee. Add onto all that the fact that our newsletter is assured of an Editor only until June plus the fact that it is put together only through the unselfish act of Mark Fisher, who has added the hat of the

from 80 to over 200 miles round trip just to attend. Asking them to take a really active part in running our group would imply long-distance phone work and consequent expenditures on their part. Of course, were they willing to volunteer their services, I suppose the group could reimburse them for their expenses. That is something for a general meeting to decide.

I see our situation as akin to what has happened to other groups who support "orphan" computers, although there is still life in the old Sinclair mare. Little by little, with the trend to include a messy-DOS

Blizzard of '93 Zaps CATS-sters

by Clive the Snowman

For the first time in recorded history, a CATS monthly meeting--on Saturday, March 13th--was canceled, and by a blizzard yet: the 1993 "Storm of the Century" (it was actually the third "100-year storm" in the last eight years).

Although no disturbance was visible to the untrained eye on Friday night, the ominous projections of every meterologist worth his/her road sand/salt caused President **MANNIE QUINTERO** and Vice President **C.H. DICKSON** to initiate an impromptu telephone chain urging members (always in a high state of anticipation, anyway) to forego the perils of travel on the roads.

Evidently the telephone chain worked. Only one half-frozen CAT was detected by New Carrollton Library personnel trying to force entry to the rear (employees') door at 1 p.m., just as the burglar alarm went off.

Meanwhile, vehicles were careening in and out of the library's Alpine-like parking lot as snow began accumulating at an inch-per-hour.

At any rate, the business meeting was extremely brief. But you should know the search still goes on for leadership (new officers) for the rest of this decade (or at least until June, 1994).

Mannie Quintero promises that all unfinished March business will be addressed in full in April, providing the hurricane season has not begun.

NOTA BENE: Interested in 300/1200 modems or dot-matrix printers? Don't miss the drawing at the April Meeting!!

U. Md. Greets H.S. Programers

by C. H. Dickson

The University of Maryland @ College Park staged its third annual High School Computer Programing Contest March 20 amid the unthawed remains of the previous week's snow-blowout.

Twenty Maryland high schools sent two, three or four-person teams to the ornate grand ballroom of the Adele Hagar Stamp Student Union, where three-dozen IBM PS/2's had been set up by IBM people at 5 a.m. that day.

After a morning of hearing all about the University's super Computer Science Department and after a luncheon of baked Eastern Shore Cornish Hen with all the extras, the students settled in for almost four hours of serious coding.

Contestants were handed seven problems to be solved using their PS/2's and Borland's Turbo-Pascal.

Problem 1 (next page), turned out to be the easiest. Atholton and Magruder high schools solved it in nine minutes (the shortest), while Springbrook high school took the longest at 1 hour, 34 minutes.

As the students developed working solutions to their problems, their Pascal code was transferred to 3.5 inch floppies and moved by runners into the judges' area, where they were validated (or rejected).

As I looked around the ballroom with its gentle hum and bustle of youthful intellectual excitement, I recalled somehow the Sinclair Show CATS put on for the children of Takoma Park in the mid-80's. Personal computers were still a new

computer in boxes of CrackerJack, and for prices to fall below what it costs to put together a reasonably comparable QL system, only the staunch maverick types continue to band together - lately in quite small numbers - and in a more-or-less unorganized fashion to continue with their "off-brand" machines and operating systems. We seem to have fallen into that category and, in fairness to our members, especially those who are newsletter-only members, we've got to do something equitable to all. Stop publishing, publish only when there is sufficient material to warrant an issue and tailor the fee accordingly, refund or rebate fees, publish articles via the bulletin board, who knows? In the words of an old, popular song, "Something's gotta Give".

So, come out to our meeting on 10 April prepared to cuss and discuss, to vote, and support YOUR group, even if it is only in its disestablishment. Bring your ideas.

I feel somewhat like Winston Churchill who is reputed to have said something like, No, Sir, I will not not participate in the dismantling of the Empire". Despite his stand, the Empire got dissolved. Who wants to be President?

This article was selected for the newsletter by Joe Miller. Time Designs Vol 5 # 2

What happens when an aerospace contractors meets the Sinclair QL?
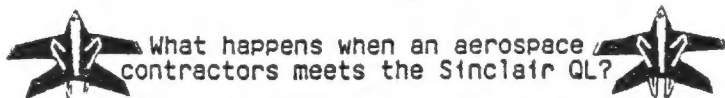
QL IN THE OFFICE: ARCHIVE

by Ed Snow

In the last issue of TDM (Vol.5 No.1), and the first part of this series, I explained how, as a data processing consultant, I intoduced an aerospace manufacturing firm to a Sinclair QL. As those who read part one are already aware, the introduction was done through the EASEL graphics software package that comes bundled with the computer.

The quality control department was so satisfied with the performance of the QL that they began to research other applications to which the machine could be placed. One which came to mind was using the QL to produce a statistical analysis of parts which had failed visual inspection.

It seems somewhat incongruous that a company using computer controlled lasers in it's manufacturing process would rely on "visual inspection" for quality control. However, the "visual inspection" process referred to here involves the use of an "optical comparator". The machine projects a magnified image of the blueprint specifications. In this way the human operator can rapidly compare the actual part against blueprint specifications. Any tolerances which are outside acceptable limits are quickly identified and the part rejected.

It is necessary for quality control to be able to identify which parts are failing this comparison; which job these parts belong to; and what percentage of the parts are failing in order to advise manufacturing control on how many parts need to be made to stay on schedule.

Prior to the introduction of the QL, these statistics were accumulated by the "pencil and calculator" method. This method leaves much to be desired in speed, and reliability is known to vary with the temperment of the operator.

Therefore, the Chief Engineer of the company requested that I come up with a system where the QL could be used to store the data and produce the statistical reports needed.

Since the department had made the choice of hardware for me, my function became one of analyzing the system requirements and determining which approach would be the most efficient. Basically I had two choices, 1) develop a BASIC system to handle the job, or 2) develop and application using one of the software packages supplied with the QL.

To make programming the system as effortless as possible, I made full use of ARCHIVE's built-in command vocabulary. For example, in the alter screen procedure, the user can search the database forwards and backwards and go directly to the first or the last records. If I have been programming in COBOL; for instance, I would have had to store record keys in holding variables and then dr a file start on the stored keys. In ARCHIVE all I had to do in the procedure was set up a do-while loop and accept a key response within the loop. This key response triggers the use of an ARCHIVE command word (see Figure 3).

The system produces two reports: a detailed report by week or week range (see Figure 4), and a summary report by job also within a specified week range (see Figure 5).

The detail report prompts the user to enter a beginning and an ending week number (for record selection), and a starting and an ending date (for the report header). The procedure then selects the records which have a week value falling within the specified range. Then the selected records are placed in ascending order by the job name. When the first record is read, the value of the job field is placed in a temporary holding variable. As each record is read, and as long

marvel then, and the children and their parents wanted to know **all about them.** So **MARK FISHER** gave them their first exciting lesson in *BASIC* and I got them to think about how a computer would make a peanut-butter-and-jelley sandwich. And many other members pitched in to make the balky TS-100's and 2068's work as promised.

In the intervening years, the various school systems jumped with a vengeance into the business of making our youngsters computer-literate, after realizing painfully that the teachers and faculty had better be trained first.

Those children from Takoma Park of the 1980's are now mostly college-age. But I saw their ghosts in the latest wave of teen-aged, high-tech gods and goddesses battling it out last month in the grand ballroom in College Park.

The top seven schools shared almost $10,000 in prize money, courtesy of the Computer Science Department and a group of generous private sector companies. Top gun was *Montgomery Blair high school* which was the only team to complete all seven problems and which walked off with $2,500. This is the science and technology magnet school which two years ago won its own super computer in a national competition. Almost cruel and unusual!!

One interesting entry was that of the French International School. Three male students conversed exclusively in French as they discussed possible solutions, then proceeded to enter them into the English-only version of Turbo-Pascal. Even with this large handicap, they were able to finish fourth from last. They promised to do better next year, however, and they will all be back! As they said on the way out, "VIVE LA FRANCE"!!

Maryland High School Programing Contest 1993

Problem 1: String Transformation

Write a program that will accept strings of up to 60 characters and transform them according to the following rules:

The Input

Input lines will consist of a string to be transformed. Input will be terminated by a line consisting of a single #.

The Output

Output will consist of the transformed strings, one per line.

Sample Input

This, believe it (or not) is a String//!
SO IS THIS
#

Sample Output

tHIS?#BELIEVE#IT#?OR#NOT?#IS#A#sTRING???
so#is#t

Continued from page 3

as the job field matches the temporary holding variable, a counter is incremented; the number of rejected parts is accumulated; the number of inspected parts is accumulated; the percentage of rejected parts for each record is calculated; and a detail line for each record is printed. As soon as the job field does not match the holding variable (the "breakpoint" is reached), a total line for that job is printed which gives the total number of rejected parts, the total number of inspected parts, and the average percentage of rejected parts for that job. The new job name is switched to the holding variable, and the process begins anew. After all of the records have been read, the program prints a grand total line for the entire report.

The summary report follows the same logic with the exception that no detail line is printed for each record. Instead, only a summary line is printed for each job, and a grand total line is printed for the entire report.

The proof of any data processing system is how well it meets the user's needs. Since the database system has been in use for over a year now with no system modifications being required, no hardware malfunctions, and no user complaints, I would have to say that the GL/ARCHIVE team has proved it's worth. In the words of the company's Chief Engineer, "That little machine doesn't owe us a dime. In fact, I ought to buy you lunch!" He did. Thanks GL.

Telescope or Camera Astro-Performance

There is little that is special about this program other than it brings together all the facts and figures pertinent to telescopes, binoculars, and cameras when used for astronomy. It is written in Basic for the TS2068 and Spectrum computers but should easily be converted to other Basics.--Robert Lussier, Burnaby, BC Canada

```
3 REM Only two items have to
        be INPUT-the aperture
        of the instrument in
        millimeters and the f/
        ratio as it is called.
        The latter is the ra-
        tio of the diameter of
        the lens(of the camera
        for example)against
        the focal length and
        this in turn is the
        distance from the lens
        to the image the lens
        forms.
4
5 REM courtesy of Maurice
        Gavins, contributed
        by R. Lussier
6
7 REM **************************
8 REM TELESCOPE or CAMERA
        ASTRO-performance
9 REM **************************
10 CLS : PRINT PAPER 5;"ASTROS
COPE or ASTROGRAPH(camera)"''
15 PLOT 0,167: DRAW 255,0
20 LET A$="NOT SUITABLE VISUAL
LY": LET T$="TELESCOPE THIS LENS
"
25 REM *input aperture+f/ratio
26
30 PRINT "APERTURE(MM) =",
40 INPUT A: IF A<6 THEN GO TO
40
50 PRINT INT A;" MM","FOCAL/RA
TIO =",: INPUT F
60 PRINT "F/";F
64
65 REM  formulae
66
70 LET FL= INT (A*F)
80 LET L=INT (A/6)
90 LET H=INT A*2
100 IF H>500 THEN LET H=500
110 LET V=1.9+INT (LN (A*A)*11)
/10
120 LET P=INT (206264/FL)
130 PRINT "F/LENGTH",FL;" MM"
134
135 REM max/min eyepiece powers
136
139 PAPER 6
140 PRINT INT (FL/L+.5);"MM FL
EP =", "x";L;" MIN POWER"
150 PRINT INT (FL/H*10)/10;"MM
FL EP =","x";H;" MAX POWER"
154
155 REM  flash scope comments
156
160 IF L>=H THEN PRINT FLASH 1;
T$( TO 10);A$
```

```
170 IF L<H AND A>=25 AND FL>=30
0 THEN PRINT FLASH 1;T$( TO 10);
A$(5 TO )
180 IF L<H AND A<25 OR FL<300 T
HEN PRINT FLASH 1;T$(11 TO );A$
184
185 REM      photo data
186
190 PAPER 5: PRINT ,,"PLATE SCA
LE",P;CHR$ 34;"ARC/MM"
200 PRINT "FIELD(36x24MM)",INT
(P)/100;CHR$ 130;" x ";INT (P*.6
66)/100;CHR$ 130
210 PRINT "RES PHOTO TRI-X",INT
(P*2)/100;CHR$ 34;"ARC"
220 PRINT "LIMIT PHOTO MAG","+"
;V+1.5
224
225 REM      visual data
226
230 PRINT ,,"RES(DAWES)VISUAL";
INT (11400/A)/100;CHR$ 34;"ARC"
240 PRINT "LIMIT VIS MAG","+";V
''
244
245 REM  eyepiece data
246
250 FOR N=1 TO 6 STEP 1.5
260 PRINT PAPER 6;"EYEPIECE FL
=",6*N;"MM = x";INT (FL/6/N)
270 NEXT N: PAPER 7
275
280 PRINT #0;"Press 'z' to COPY
,'r' to RUN": PAUSE 0
290 IF INKEY$="z" THEN COPY
300 RUN
9900
9990 SAVE "SCOPE" LINE 1
```

ASTROSCOPE or ASTROGRAPH(camera)

APERTURE(MM) =	444 MM
FOCAL/RATIO =	F/4.5
F/LENGTH	1998 MM
27MM FL EP =	x74 MIN POWER
3.9MM FL EP =	x500 MAX POWER
TELESCOPE SUITABLE VISUALLY	

PLATE SCALE	103"ARC/MM
FIELD(36x24MM)	1.03° x 0.68°
RES PHOTO TRI-X	2.06"ARC
LIMIT PHOTO MAG	+16.8

RES (DAWES)VISUAL	0.25"ARC
LIMIT VIS MAG	+15.3

EYEPIECE FL =	6MM	= x333
EYEPIECE FL =	15MM	= x133
EYEPIECE FL =	24MM	= x83
EYEPIECE FL =	33MM	= x60

At: New Carrollton Public Library 7414 Riverdale Road (Hwy 410), New Carrollton, MD

The next meeting of CATS will be held on: April 10, 1993

12:00 M Hardware Workshop
2:00 PM General Meeting
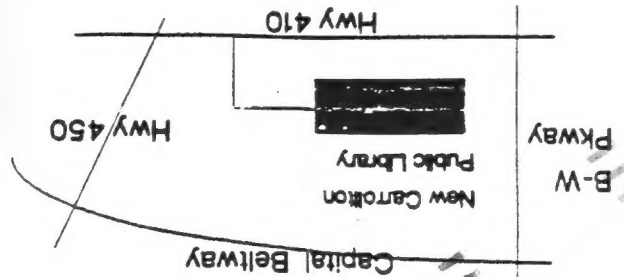
Hwy 410

Hwy 450

B-W Pkway

New Carrollton Public Library

Capital Beltway

FIRST CLASS MAIL

USA 29
BERGEN & McCARTHY

03 APR 1993

CATS Newsletter
P.O. Box 11017
Takoma Park, MD 20913

The Capital Area Timex/Sinclair Users Group

is a not-for-profit group devoted to serving the interests of those who own, use, or are interested in the Timex/Sinclair family of computers.

Executive Board

President	Mannie Quintero
1st V. Pres.	Hank Dickson
2nd. V. Pres.	Open
Record. Sec.	Open
Correspond. Sec.	Joe Miller
Treas.	Barry Washington

Immediate Past President
Duane Parker

Newsletter Editor
& Contact   Mark Fisher
(301) 589-7404
(301) 588-0579 BBS

Meetings

Monthly meetings are held from 11:00AM to 4:30 PM on the second Saturday of each month at the New Carrolton Public Library.

Newsletter

Memberships cost $15 per year, are good for 12 months and include all privileges (access to libraries, group buys, etc.). A newsletter-only subscription is available for persons living outside the Washington Metro area and is $12 per year.

Networks

Timex SIG on Compuserve: Wednesday night 10:00 PM Eastern Standard Time (GO CLUB)

CATS BBS: (301)588-0579, 8-N-1. 300/1200 baud. News and general information, 24 hours a day.